

IEA PROJECT DESCRIPTION

The project goal is to better serve the Integrated Ecosystem Assessment (IEA) community by:

- focusing on enhancing tools to aggregate and transform various data to and from DIF standards;
- modifying the ERDDAP tool to provide enhanced integration with selected IOOS DIF data services;
- prototyping, in collaboration with the Ecosystem Goal Team, the implementation of IOOS DIF data services into the IEA model for the Gulf of Mexico and California Current Regions

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The project focuses on 2 DIF objectives:

- utilizing the principles of IOOS Data Management and Communications (DMAC), develop a methodology to improve upon existing ocean data integration efforts that will facilitate flexibility and extensibility to other variables, systems and decision-support tools;
- achieve improved integration of selected data sets by identifying, adopting, and adapting community-developed standards for data content, metadata, quality control, and transport and deploying these standards at selected data sources serving the 4 decision-support tools.

IEA PROJECT WORKING GROUP DESCRIPTION

- ✓ IOOS DIF Team
- ✓ National Marine Fisheries Service's Southwest Fisheries Science Center / Pacific Fisheries Environmental Laboratory (PFEL) / Environmental Research Division (ERD)
- ✓ National Oceanographic Data Center (NODC) / National Coastal Data Development Center (NCDDC)

IEA PROJECT TASKS & MILESTONES

| # | Description | Performer | Status |
|--------|---|--------------|----------------------------|
| Task 1 | Modify ERDDAP to support current OOSTethy's and IOOS SOS changes and enhancements | ERD | completed |
| Task 2 | Enable ERDDAP to accept HTTP GET URLs that follow the OGC WMS specification, and return the images in a WMS format | ERD | completed for gridded data |
| Task 3 | Enable ERDDAP to provide output in netCDF4/HDF5 format to support fundamental IEA data services associated with Regional Ecosystem Data Management (REDM) | NCDDC | ??? |
| Task 4 | Add the ability for ERDDAP to output data of appropriate types from other services in IOOS GML format | ERD | mostly completed |
| Task 5 | Enable ERDDAP to be able to act as an IOOS SOS server, i.e. to accept the IOOS proposed HTTP GET request for its SOS service, and return IOOS GML for appropriate data types | ERD | mostly completed |
| Task 6 | <p>a. Develop tools for a user customizable dynamic IEA using ERDDAP for the data delivery mechanism, similar to what can be done with iGoogle</p> <p>b. Integrate ERDDAP with the subscription-service based architecture underlying the Regional Ecosystem Data Management (REDM) system developed at NCDDC</p> | ERD NCDDC | not done |

IEA CHALLENGES AND LESSONS LEARNED

- ❑ Task 2 for non-gridded data is ambiguous as no DIF standard introduced for exactly what graphics to produce or how to notate them.
- ❑ Task 4 may not be fully completed because not all of the data sources that ERDDAP can access can be translated into IOOS SOS GML format either because there is no IOOS schema for that data type, or metadata at the source is insufficient.
- ❑ Task 5 experienced some technical problem because of a symmetry of ERDDAP requests/responses – all grids can return the same family of responses and all tables return the same family of responses; further ERDDAP enhancement resolves that problem and even allows mapping of grids into tables for some of the potential SOS responses.
- ❑ Tasks that actively involved NCDDC (3 and 6) will not be completed due to the failure to funding.

NEXT STEPS/ RECOMMENDATIONS

- What is the next phase of your project/working group?
- Provide recommendations for going forward.